

KONDRAT'YEV, S.M.; KUZNETSOV-FETISOV, L.I.

Inhibition of liquid sulfur trioxide polymerization by boric anhydride. Trudy KKHTI no.26:161-166 '59. (MIRA 15:5)

1. Kafedra fizicheskoy i kolloidnoy khimii Kazanskogo khimiko-  
tekhnologicheskogo instituta imeni S.M.Kirova.  
(Sulfur trioxide) (Polymerisation)  
(Boron oxide)

30506  
S/194/61/000/008/058/092  
D201/D304

11.1160

AUTHORS: Batuyev, Yu.V. and Kuznetsov-Fetisov, L.I.

TITLE: Intensification by ultrasonic field of certain reactions in the nitrogen industry

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 11, abstract 8 E81 (Tr. Kazansk. khim. tekhnol. in-ta, 1960, no. 29, 128-132)

TEXT: The effect was studied of ultrasound on the reaction of inversion of nitrite into nitrate and on the synthesis of nitric acid from liquid nitrogen oxides. The frequency was 21 kc/s and intensity 6-7 W/cm<sup>2</sup>. It was established that ultrasound intensifies considerably (as compared with mechanical stirring) the inversion reaction of nitrite into nitrate; the reaction does not depend on the solution concentration and is accelerated considerably with temperature increasing to 60-80°C. Under the effect of ultrasound, the synthesis of concentrated nitric acid from liquid nitrogen

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0506

Intensification by ultrasonic field...

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oxides takes place at 0-20°C with no pressure and with air as an oxidizer, but always with an excess of  $N_2O_4$  (~100% compared with the stoichiometric mixture). 3 tables. 7 references. [Abstracter's note: Complete translation]

Card 2/2

30507

S/194/61/000/008/059/092  
D201/D304

11.1160

AUTHORS:

Kuznetsov-Fetisov, L.I. and Batuyev, Yu.V.

TITLE:

The ultrasound intensification of the process of producing concentrated nitric acid by the direct synthesis

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 11, abstract 8 E82 (Tr. Kazansk. khim.-tekhrol. in-ta, 1960, no. 29, 139-140)

TEXT:

The mixture of nitrogen oxides were placed in glass and steel vessels and subjected to ultrasound at a frequency of 21 kc/s and intensity of 6 W/cm<sup>2</sup>. With a 100% excess of N<sub>2</sub>O<sub>4</sub> in the nitrogen oxide and nitric acid mixture, with nitric concentration at 50% and air as oxidizer, the concentration of nitric acid reaches 82.2% after 15 minutes of ultrasonic action, it reaches 88% after 30 min. and 92.2% after 60 min. With industrial oxygen as an oxidizer the concentrations are 85.4%, 92.3% and 95.1% respectively. ✓

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The ultrasound intensification...

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With a 50% excess of  $N_2O_4$  compared with the stoichiometric composition, the concentration of nitric acid is as follows: with air oxidation and 15 min. of ultrasound 78.9%, after 30 min. 85.3% after 60 min. 88.2%; with oxygen oxidation the values are 81.4%, 87.6%, 90.5% for 15, 30 and 60 min. of ultrasound effect respectively. ✓  
The change of the reaction temperature from 0 to 50°C does not materially affect the concentration of the nitric acid obtained. The concentration of nitric acid in a glass vessel, with other conditions remaining the same, is higher than that in a steel vessel. All experiments were carried out without any pressure being applied.  
[Abstracter's note: Complete translation]

Card 2/2

KONDRAT'YEV, S.N.; KUZNETSOV-FETISOV, L.I.; ZINKICHEVA, K.A.

Vapor pressure, density, and viscosity of stabilized sulfur  
trioxide. Trudy KKHTI no.30:198-204 '62. (MIRA 16:10)

KRASNYI, E.B.; KUZNETSOV-FETISOV, L.I.

Study of adsorption and desorption of nitrogen dioxide - nitrogen  
tetroxide on technical silica gels ASM and No.6. Trudy KKHTI  
no.30:223-239 '62. (MIRA 16:10)

KRASNYI, E.B.; KUZNETSOV-FETISOV, L.I.; ROZENBERG, G.I.

Adsorption of small concentrations of nitrogen peroxide - nitrogen  
tetroxide under dynamic conditions. Izv.vys.ucheb.zav.;khim.i  
khim.tekh. 6 no.5:802-806 '63. (MIRA 16:12)

1. Kazanskiy khimiko-tekhnologicheskii institut imeni S.M.Kirova,  
kafedra tekhnologii neorganicheskikh veshchestv.



KUZNETSOVA

Dynamics and flow of phytoplankton in the Volga River near Kuybyshev. Trudy probl. i tem. sov. no.7:108-110 '57. (MLRA 10:4)  
(Volga River--Phytoplankton)

1. SMIRNOV, A. P.: CHENIKOV, V. V.: KUZNETSOVA, A. A.
  2. USSR (600)
  4. Tobacco - Analysis and Chemistry
  7. Effect of tobacco tar on its steeping rate. Tabak 13 no. 6, 1952.
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- 9.
- Monthly List of Russian Accessions
- , Library of Congress, March 1953. Unclassified.

Kuznetsova, A. A. -- "Sequelae of Severe Injuries of the Maxillary-Dental System (of Gun-Shot Origin) and Principles of Orthopedic Treatment," Min Public Health RSFSR, Moscow Medical Stomatological Inst, Moscow, 1955 (Dissertation for Degree of Doctor of Medical Sciences.)

SO: Knizhnaya Letopis', No. 23, Moscow, Jun 55, pp 87-104

KUZNETSOVA, A. A.

"Preventative Vaccination Using Live Ampule-Packaged Cultures of Leishmania Tropica for the Prophylaxis of the Spontaneous Borovskiy Disease (Southern Leishmaniasis)." Cand Biol Sci, Ashkabad Inst of Epidemiology, Microbiology, and Hygiene, Min Health USSR, Ashkabad, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

KORSHAKOVA, A.S.; SKAVINSKIY, Yu.V.; KUZNETSOVA, A.A.; POTEYENKO, O.M.;  
ARKHIPOVA, V.A.; GAL'PERIN, I.P.; TENDENTNIK, Yu.Ya.; KIYASHKO,  
M.A.

Studying the immunogenic factor in per os immunization against  
dysentery. Zhur, mikrobiol. epid. i immun 28 no.2:131-132  
F '57 (MLRA 10:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei  
AMN SSSR.  
(DYSENTERY--PREVENTIVE INOCULATION)

LITVINOV, V.N.; KUZNETSOVA, A.A.

We are protecting mustard against pests. Zashch. rast. ot vred.  
1 bol. 2 no.6:48 N-D '57. (MIRA 16:1)

1. Predsedatel' kolkhoza Leninsk, Leninskogo rayona (for  
Litvinov). 2. Zaveduyushchaya Leninskim punktom sluzhby ucheta  
i prognozov (for Kuznetsova).

(Mustard—Diseases and pests)  
(Spraying and dusting in agriculture)

KAUFMAN, Mikhail Simonovich; KUZNETSOVA, Anna Alekseyevna; KHRUMICHEV,  
Yuriy Andreyevich; BRODSKIY, S.I., red.; BORUNOV, N.I.,  
tekhn. red.

[Manufacture of spirals, grids, and leads of electronic  
vacuum devices]Proizvodstvo spiralei, setok i vvodov elektro-  
vakuumnykh priborov. Moskva, Gosenergoizdat, 1962. 262 p.  
(MIRA 16:4)

(Electron tubes)

BELYAKOV, V.A.; VAN YUN-CHANG [Wang Young-ch'ang]; VIRYASOV, N.M.;  
DU YUAN'-TSAY [Tu Yuan-ts'ai]; KIM KHI IN; Kladnitskaya, Ye.N.;  
KUZNETSOVA, A.A.; NGUEN DIN TY; PENEV, V.N.; SOKOLOVA, Ye.S.;  
SOLOV'IEV, M.I.  
Properties of  $\pi^0$ -mesons produced together with strange particles  
in  $\pi^+p$ -interactions and  $\pi^-C$ -interactions. Zhur.eksp.i teor.fiz.  
44 no.5:1474-1480 My '63. (MIRA 16:6)

1. Ob'yedinenyy institut yadernykh issledovaniy.  
(Moscow) (Nuclear reactions)



"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000928220001-7

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000928220001-7"

~~CHEGODAYEV~~ ~~KUZNETSOVA~~  
CHEGODAYEV, D.D.; BUGORKOVA, N.A.; KUZNETSOVA, A.A.; YAVZINA, N.Ye.

On the nature of spherulites in polytrifluorochloroethylene [with  
summary in English. Zhur.fiz.khim. 31 no.9:2061-2065 S '57.

(Ethylene) (Spherulites)

(MIRA 11:1)

23870

S/186/61/003/001/003/020  
A051/A129

21,3200

AUTHORS: Kusnetsova, A.A., Samoylov, O.Ya., Tikhomirov, V.I.

TITLE: The salting-out action of cations and the covalency of their interaction with the water molecules of the solution

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 10-13

TEXT: The cause for the decrease in the effectiveness of the salting-out agent with an increase in the covalency of its interaction with water, viz. the fact that the covalent interaction of the cation of the salting-out agent with the water molecules closest to it brings about a decrease in the effective charge of the cation (Ref. 1), was investigated. A comparative study was made of the salting-out action of the nitrates, the cations of which have the same charges and radii, but differ in the structure of their electron shells. A further study was made of the effect of nitrates of rubidium, thallium (I), nickel (II) and cobalt (II) on the distribution of small quantities of uranyl nitrate between aqueous solutions and diethyl

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The salting-out action of cations ...

ether. It was established that the chosen salting-out agents in the experiments were poorly soluble in diethyl ether and did not pass into the organic layer under the given conditions of the experiments. The relationship of the distribution coefficient of uranyl nitrate to the concentration of the salting-out agents was investigated in the initial aqueous solutions. Table 1 shows the results of the determinations of the uranyl nitrate distribution coefficients between diethyl ether and aqueous solutions containing  $\text{Rb}^+$  and  $\text{Tl}^+$  nitrates. It is seen therefrom that the coefficients of the uranyl nitrate distribution between the diethyl ether and aqueous solutions containing these nitrates are very low, and the difference between the average values of  $\alpha$  is slight. Table 2 lists the values of the coefficients of uranyl nitrate distribution between diethyl ether and aqueous solutions in the presence of  $\text{Mg}^{2+}$ ,  $\text{Ni}^{2+}$  and  $\text{Co}^{2+}$ , and the graph shows the graphical relationship of  $\alpha$  to the concentration at  $25^\circ\text{C}$ . From the latter it is seen that in the case of cobalt and nickel nitrates the relationship of  $\alpha$  ( $\alpha$ ) is expressed by one curve and they are much less effective as salting-out agents than  $\text{Mg}^{2+}$ . With an increase in the temperature from 0 to  $25^\circ\text{C}$  there is a drop in the distribution coefficient of the uranyl nitrate in all cases, but

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The salting-out action of cations ....

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the indicated difference in the salting-out action of  $Ni^{2+}$  and  $Co^{2+}$  as compared to that of  $Mg^{2+}$  is maintained both at 0 and at 25°C. The authors conclude that the former relationship of the salting-out effect to the covalency of the interaction of its cations with the water molecules of the solution given in Ref 1 is confirmed. The observed effects were also investigated with relation to the pH of the solution. It is assumed by the authors that in view of the experimental results this observed effect should decrease with an increase in the acidity and the salting-out agents can become reverse in their salting-out action. There are 2 tables, 1 graph and 5 Soviet-bloc references.

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LH

23871  
S/186/61/003/001/004/020  
A051/A129

21.3200

AUTHORS: Samoylov, O.Ya., Tikhomirov, V.I., Ionov, V.P., Kuznetsova, A.A.

TITLE: The relationship between the effectiveness of the salting-out agent and the hydration of the salting-out ion

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 14-18

TEXT: In the present work the authors have investigated the relationship between the effectiveness of the salting-out agent and the hydration of the salting-out ion, using the qualitative theory developed in Ref 1. It is seen that the stronger the salting-out cation is hydrated, the more effective the given salting-out agent should be in relation to it, i.e., the higher should be the value of its  $\Delta E_{\text{salting-out}}$  (a decrease in the energy of activation of the water molecule extraction from the closest surroundings of the extracted ion). Thus,

$$\Delta E_{\text{salting-out}} \approx \frac{k}{S_1^3} (3),$$

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The relationship between the effectiveness ...

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where  $k$  is a coefficient depending on the cation charge of the salting-out agent, dipole moment of the water molecule and characteristics of the water solution, and  $\bar{S}_i$  - the average (effective) distance between the salting-out cation and the  $i$ -cation of the salting-out agent. With an increase in the hydration of the salting-out ion, the value of  $E_{\text{salting-out}}$  related to the action of a certain salting-out agent on it increases: (4)

$$(\Delta E_{\text{salt.-out}})_i > (\Delta E_{\text{salt.-out}})_j \quad \text{or} \quad (\Delta E_{\text{salt.-out}})_i = \gamma (\Delta E_{\text{salt.-out}})_j$$

where the coefficient  $\gamma > 1$ . For various salting-out agents it is assumed that the values of the coefficients are about equal, then:

$$(\Delta E_{\text{salt.-out}})_i = \gamma (\Delta E_{\text{salt.-out}})_j \quad (5)$$

where  $s = 1, 2, 3$ , corresponding to the different salting-out agents. The authors investigate the salting-out ions  $i$  and  $j$ , whereby the  $i$ -ion is characterized by a higher hydration than the  $j$ -ion. It is established that the relationship of  $\Delta E_{\text{salt.-out}}$  to the hydration of the salting-out ion

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The relationship between the effectiveness...

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brings about the equation:

$$\left(\frac{a}{a_2}\right)_1 > \left(\frac{a}{a_2}\right)_j \quad (9)$$

(where  $a$  is the distribution coefficient [Ref 1]). It is confirmed experimentally by investigating the extraction of uranyl and thorium with tributylphosphate from water solutions containing magnesium, calcium and strontium nitrates. Equation 9 indicates that with a strengthening of the hydration of the salting-out ion the relative increase in the distribution coefficient grows, determined by the growth of the effectiveness of the salting-out agent. Table 1 lists the determined values of the distribution coefficients of uranyl and thorium, and table 2 lists the ratios of the distribution coefficients for uranyl and thorium in the presence of various salting-out agents from a group of magnesium, calcium and strontium nitrates. The ratios taken are that of the distribution coefficients in the presence of a more effective salting-out agent to the value of the distribution coefficient in the presence of a less effective salting-out agent. The data of table 2 show that these ratios for thorium are greater than for uranyl. Since thorium is

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hydrated more strongly in aqueous solutions than uranyl, it is concluded that the experimental results confirm the validity of equation (9). There are 2 tables, 9 formulae and 6 references; 4 Soviet-bloc, 2 non-Soviet-bloc.

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ACCESSION NR: AP4031096

S/0186/64/006/002/0173/0181

AUTHOR: Tikhomirov, V. I.; Kuznetsova, A. A.; Batorovskaya, E. D.

TITLE: Extraction of uranium (VI) with n-trioctylamine (TOA) in the presence of certain cations. I. Nitric acid solutions.

SOURCE: Radiokhimiya, v. 6, no. 2, 1964, 173-181

TOPIC TAGS: uranium (VI), extraction, trioctylamine, salting out agent, nitrate, cation charge, cation radius, partition coefficient, distribution coefficient, nitric acid

ABSTRACT: The effect of different concentrations of nitrates in aqueous nitric acid solutions containing uranyl nitrate on the extraction of the U(VI) from these solutions with TOA was investigated. A 0.537 M solution of TOA in  $CCl_4$  was used as the organic extractant; 0.05-8 M aqueous nitric acid solutions, less than 0.02 M uranyl nitrate, and different concentrations of potassium, ammonium, lithium, strontium, calcium, cadmium, zinc, nickel, cobalt, magnesium and aluminum nitrates were used. The U(VI) in water was determined colorimetrically with arsenazo I or arsenazo III and in the organic phase with arsenazo III. In the

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ACCESSION NR: AP4031096

extraction of U(VI) from  $\text{HNO}_3$  solutions with TOA, as in extraction with oxygen-containing extractants, the salting out action in a constant concentration of nitrates and  $\text{HNO}_3$  increases with an increase in the charge of the salting agent cation and increases as the cation radius decreases. The effectiveness of the salting out agent decreases as the covalency of the reaction of the cation with the vicinal water molecules decreases. As the acidity of the aqueous phase increases, the effect of the nature of the salting agent cation is less definite; at nitrate concentrations above 7-9 gm.ions/l the partition coefficient decreases independently of the nature of the cation of the salting out agent and independently of the  $\text{HNO}_3$  concentration. Orig. art. has: 3 tables, 3 figures and 1 equation.

ASSOCIATION: None

SUBMITTED: 24Nov62

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: GC

NO REF SOV: 015

OTHER: 012

Card 2/2

ACCESSION NR: AP4031097

8/0186/64/006/002/0182/0187

AUTHOR: Tikhomirov, V. I.; Kuznetsova, A. A.; Batorovskaya, E. D.

TITLE: Extraction of uranium (VI) with n-triethylamine (TOA) in the presence of certain cations. II. Hydrochloric acid solutions.

SOURCE: Radiokhimiya, v. 6, no. 2, 1964, 182-187

TOPIC TAGS: uranium (VI) extraction, triethylamine extraction, salting out agent, chloride, cation radius, cation charge, salting out agent concentration, partition coefficient, hydrochloric acid, distribution coefficient

ABSTRACT: The authors continued their study (Radiokhimiya, 6, 2, 173, 1964) of the extraction of uranium (VI) with TOA from acid solutions and the effect of salting out agents using hydrochloric acid solutions containing different concentrations of potassium, ammonium, sodium, lithium, strontium, calcium, magnesium and aluminum chlorides. A 0.10 M solution of TOA in  $CCl_4$  was used as the extractant. The behavior of the chloride and nitrate salting out agents in the extraction of uranium (VI) with TOA from HCl and  $HNO_3$  solutions, respectively, is analogous, i.e. the salting out corresponds to a decrease in the radius of the

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ACCESSION NR: AP4031097

cation and increases with increase in the cation charge. However, the nature of the cation of the salting out agent is more distinct in the case of the nitrates. Increasing the HCl concentration to 4 M increases the partition coefficient of uranium (VI). With increasing concentration of the salting out agent, lg deviates from a straight line. This is attributed to a decrease in the concentration of free extractant (TOA·HCl) because of the extraction of HCl in the organic phase. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 24Nov62

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SUB CODE: GC

NO REF SOV: 003

OTHER: 001

Card 2/2

ACCESSION NR: AP4031098

8/0186/64/006/002/0187/0191

AUTHOR: Tikhomirov, V. I.; Kuznetsova, A. A.; Batorovskaya, E. D.

TITLE: Extraction of uranium (VI) with n-trioctylamine (TOA) in the presence of certain cations. III. Sulfuric acid solutions.

SOURCE: Radiokhimiya, v. 6, no. 2, 1964, 187-191

TOPIC TAGS: uranium VI, extraction, trioctylamine extraction, distribution coefficient, acid solution, sulfuric acid solution, uranium trioctylamine complex, salting out, partition coefficient

ABSTRACT: The distribution of uranium (VI) between a 0.1 M solution of TOA in  $\text{CCl}_4$  and 0.05, 1 and 2 N  $\text{H}_2\text{SO}_4$  solutions to which different amounts of the sulfates of lithium, sodium, ammonium, magnesium and aluminum were added was determined. This is a continuation of similar work using nitric and hydrochloric acid solutions (Radiokhimiya, 6, 2, 173 and 182, 1964. On extracting the  $\text{U(VI)TOA}$  complex from sulfuric acid solutions, the addition of sulfates decreases the distribution coefficient  $\alpha$  regardless of the concentration and nature of the cation. There is however a clear relationship between the reverse  $\alpha$  and the

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cation radius of lithium, sodium and ammonium sulfates. The order of the effect of cations of different valency changes as the acidity of the aqueous phase is increased. In comparison with extractions with  $\text{HNO}_3$  and  $\text{HCl}$  solutions, the nature of the cation of the salt affects the distributions of  $\text{U(VI)}$  much less; the nature of the cation is less clear the greater the anion inclination to form complexes with uranium. On extracting in the presence of  $\text{Na}_2\text{SO}_4$  the acid content in the organic phase is less than in the presence of  $\text{Mg}$  or  $\text{Al}$  sulfates;  $\text{Na}_2\text{SO}_4$  causes less salting out of the  $\text{U(VI)}$  in strong acid solutions than the polyvalent sulfates. Orig. art. has: 3 tables and 2 figures.

ASSOCIATION: None

SUBMITTED: 24Nov62

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: GC

NO REF SOV: 004

OTHER: 001

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Card

... .. oxotetrachloride and



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NO REF SOV: 006

OTHER: 000

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000928220001-7"

BUSLAYEV, Yu.A.; KUZNETSOVA, A.A.; PODZOLKO, Yu.G.

Ammonolysis of tungsten (VI) oxo chlorides. Izv. AN SSSR.  
Neorg. mat. 1 no.6:903-906 Je '65. (MIRA 18:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.  
Kurnakova AN SSSR.

TIKHOMIROV, V.I.; KUZNETSOVA, A.A.; BATOROVSKAYA, E.D.

Extraction of uranium (VI) with n-trioctylamine (TOA) in the presence of some cations. Radiokhimiia 6 no.3:173-174, 1958.

Extraction of uranium (VI) with n-trioctylamine (TOA) in the presence of some cations. Part 2: Chloride solutions. Ibid.:182-187

Extraction of uranium (VI) with n-trioctylamine (TOA) in the presence of some cations. Part 3: Sulfate solutions. Ibid.:187-191 (MIRA 17:6)

KUZNETSOVA, Anastasiya Aleksandrovna; GOGOLIN, A.A., nauchnyy red.;

CHICHKOV, N.V., red.; BABICHEVA, V.V., tekhn. red.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928220001

[Water-cooling system for small refrigerating plants; scientific report] Gradirnaia dlia malykh kholodil'nykh ustanovok; nauchnoe soobshchenie. Moskva, Gos. izd-vo torg. lit-ry, 1958. 7 p. (MIRA 14:7)

(Refrigeration and refrigerating machinery)

BER, B., inzh.; KUZNETSOVA, A., inzh.

Standards for refrigeration equipment of food stores. Khol.tekh. 35  
no.5:49-51 8-0 '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy  
promyshlennosti.  
(Food--Preservation) (Refrigeration and refrigerating machinery)

KUZNETSOVA, A., inzh.; YABOBSON, V., kand. tekhn. nauk

Methods of testing refrigeration equipment [with summary in English]. Khol.tekh. 37 no.2:36-40 My-Ap'60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti.

(Refrigeration and refrigerating machinery--Testing)

KUZNETSOVA, A., inzh.; PREOBRAZHENSKAYA, N., inzh.; EL'KIN, I.

Triple-deck refrigerated display case 3B-13. Khol. tekhn. 37 no. 5:33-35 8-0 '60.  
(MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Kuznetsova and Preobrazhenskaya). 2. Khar'kovskoye opytno-konstruktorskoye byuro trgovogo mashinostroyeniya (for El'kin).

(Display of merchandise) (Cold storage)

BER, Boris Arkad'yevich; KUZNETSOVA, Anastasiya Aleksandrovna; GOGOLIN, A.A.,  
kand. tekhn. nauk, nauchnyy red.; KAPLUN, M.S., red.; BRODSKIY, M.P.,  
tekhn. red.

[New types of commercial refrigerating equipment] Novye vidy торго-  
vogo kholodil'nogo oborudovaniia; nauchnoe soobshchenie. Moskva,  
Gos. izd-vo torg. lit-ry, 1961. 44 p. (MIRA 14:10)  
(Refrigeration and refrigerating machinery)

KUZNETSOVA, A.A., inzh.

Norms for the equipment of self-service stores with commercial refrigerating machinery. Khokh. 39 no.4:76-77 J1-Ag '62.(MIRA 17:2)



KUZNETSOVA, A.A., inzh.

Film cooling tower for small refrigeration systems. Khol.tekh.

41 no.1:65 Ja-F '64.

(MIRA 17:3)

KURKO, V.I., kand. tekhn. nauk; KEL'MAN, L.F., inzh.-khimik;  
MEL'TSER, F.R., inzh.-khimik; KUZNETSOVA, A.A., laborant

Comparative phenol characteristics of smoking preparations  
and uncooked smoked sausage. Trudy VNIIMP no.16:211-220 '64.  
(MIRA 18:11)

KUZNETSOVA, A. B.

Cand Phys-Math Sci - (diss) "Problems of the theory of entrance and exit of particles in the synchrophasotron." /Dubna, 1961/ 8 pp; (Joint Inst of Nuclear Studies, Laboratory of Nuclear Problems); 160 copies; price not given; bibliography on pp 7-8 (10 entries); (KL, 5-61 sup, 173)

TS227.166

TREASURE ISLAND BOOK REVIEW

AID 786 - S

KUZNETSOVA, A. D., BAZHENOV, V. V., and YAROVINSKIY, L. M.

(Eng.)

SVARKA VYSOKOPROCHNOGO CHUGUNA SO SFEROIDAL'NYM GRAFITOM (Welding High strength Cast Iron with Spheroidal Graphite). In K. V. Lyubavskiy, ed. Novoye v tekhnologii svarki (Innovations in the Welding Technique). MASHGIZ 1955. p. 144-157.

This article presents the results of investigation of the weldability of high-strength cast iron and arc welding with steel electrodes, iron-nickel electrodes, and electrodes of special cast-iron alloys. It also discusses the oxyacetylene welding of high strength cast iron. Five pictures and graphs, and 4 tables.  
4 Russian references, 1947-1953.

1/1



KUZNETSOVA, A.D.; RUBEL', A.A.

Creatinuria in some forms of labor anomalies; preliminary report.  
Sbor.nauch.trud.Kaf.akush. i gin. 1 IMI no.2:137-141'61.

(MIRA 16:7)

(CREATINE) (LABOR, COMPLICATED)  
(URINE---ANALYSIS AND PATHOLOGY)

VASIL'YEVA, Ye.T.; KUZNETSOVA, A.D.; IAYZAN, Ye.I.

Use of colpeuryxis according to the type of communicating vessels  
in pelvic presentation of the fetus. Kaz. med. zhur. no.6:75-77  
N-D '63. (MIRA 17:10)

1. Kafedra akusherstva i ginekologii (zav. - prof. I.I. Yakovlev)  
1-go Leningradskogo meditsinskogo instituta imeni akademika Pavlova.

KUZNETSOVA, A.D.; RUBEL', A.A.

Creatinuria in labor atonia, one of the abnormal labor forms.

Akush. i ginek. 40 no.5:38-41 S-O '64.

(MIRA 18:5)

1. Kafedra akushorstva i ginekologii (zav. - prof. I.I.Yakovlev)  
I Leningradskogo meditsinskogo instituta imeni Pavlova.



KUZNETSOVA, A. F.

KUZNETSOVA, A. F.: "The reaction of certain varieties of potatoes to drying conditions." Min Higher Education. Gor'kiy Agricultural Inst. Gor'kiy, 1956. (Dissertation for the Degree of Candidate inA Agricultural Sciences)

Source: Knizhnaya letopis'

No. 28

1956

Moscow

KUZNETSOVA, A.F.

Recent data on the Asiatic smelt *Osmerus eperlanus dentex*  
Steindachner. *Izv. TINRO* 48:214-215 '62. (MIRA 16:4)

(Amur River--Smelts)

YEVREINOVA, T.N.; KUZNETSOVA, A.F.

Interference microscopic determination of the weight of individual  
coacervate drops. Dokl.AN SSSR 124 no.3:688-690 Ja '59.  
(MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
Predstavleno akademikom A.I. Oparinym.  
(Coagulation) (Interferometry)

KUZNETSOVA, A.F., fel'dsheritsa (Kolonna)

~~Nurses'~~ activities in a therapeutic consulting room in a polyclinic.  
Mod.sestra 17 no.2:27-29 F '58. (MIRA 11:3)  
(NURSES AND NURSING)

KUZNETSOVA, A.F., meditsinskaya sestra (Kolomna)

Work of the nurse in the infectious (intestinal) consulting room  
of a polyclinic. Med.sestra no.6:50-51 Je '62. (MIRA 15:8)  
(NURSES AND NURSING)

KUZNETSOVA, A.F., meditsinskaya sestra

Conference of subprofessional medical personnel of Moscow and  
Moscow Province. Med.sestra 21 no.8:55-57 Ag '62. (MIRA 15:9)  
(MOSCOW PROVINCE--MEDICAL PERSONNEL) (NURSES AND NURSING)

17(3)

AUTHORS:

Yevreinova, T. N., ~~Kuznetsova, A. F.~~

SOV/20-124-3-56/67

TITLE:

Weight Determination of Isolated Coacervate Drops by Means of Interference Microscopy (Opredeleniye vesa otdel'nykh koatservatnykh kapel' s pomoshch'yu interferentsionnoy mikroskopii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 688-690 (USSR)

ABSTRACT:

The phenomenon of coacervation is wide-spread in organisms and can also be reproduced in artificial objects (Refs 4,6). In the latter case, a concentration of the colloidal particles from dilute solutions takes place, the particles separating from the liquid in the form of drops or of a layer. Consequently, the nature of coacervation consists in the transition of a dissolved, diffusely spread substance into more solid formations that have new, specific properties (Ref 2). In this process, the concentration of the substances reaches considerable dimensions. As, e.g., the concentration of the nucleic acids in individual drops was fifteen times as high as that of the nucleic acids in the solution, it was possible to determine these acids in individual coacervate drops by means of an ultraviolet microscope. However, there are many compounds which, unlike nucleic acids, do not absorb the ultraviolet rays, but which readily form coacervate drops (proteins, carbohydrates, lipides).

Card 1/3

SOV/20-124-3-56/67

Weight Determination of Isolated Coacervate Drops by Means of Interference  
Microscopy

Scientific publications do not contain any data on the concentration degrees of these substances in individual coacervate drops. In the paper under consideration, the concentrations of protein and carbohydrate were determined by the aid of interference microscopy. For this purpose, (a) a bifocal interference microscope, and (b) a Shering microscope were used. The coacervate drops (9 - 177  $\mu$  diameter) were obtained separately from aqueous gelatine and gum arabic solutions (Fig 3), as well as by the addition of ribonucleic acid (Figs 4,2) and desoxyribonucleic acid (Figs 4,3). From an analysis of the curves in figures 3 and 4 it can be seen that (1) the dry weight of the drop increases with increasing volume. The concentration of the dry substances, calculated per volume unit, decreases (Table 1). In coacervate drops which contain ribonucleic acid and sodium acetate in addition to gum arabic and gelatine, the dry weight increases by the 55-fold with a volume increase by the 141-fold, whereas the concentration recedes to the 1:2.5-fold. The same applies to drops containing desoxyribonucleic acid instead of ribonucleic acid. (2) The concentrations of gum arabic and of gelatine in individual coacervate drops is 12.47 times higher than in the initial solutions. The highest concentration of the 5 above

Card 2/3



SOV/20-124-3-56/67

Weight Determination of Isolated Coacervate Drops by Means of Interference  
Microscopy

mentioned substances was observed in the smallest drops, which also showed greater density than the large drops. The small drops are characterized by a linear dependence between the volume of the drop, its weight, and the concentration of dry substance therein.

(3) In one and the same coacervate, consisting of drops and a liquid in equilibrium, drops of most different weights and volumes occur. Their weights may equal those of certain unicellular organisms. Professor A.N.Zakhar'yevskiy assisted in the investigations, A. I. Oparin, Academician, conducted the work.- There are 4 figures, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: August 16, 1958, by A. I. Oparin, Academician

SUBMITTED: July 7, 1958

Card 3/3

BRODSKIY, V.Ya.; KUZNETSOVA, A.F.

Interference microscopy of ganglionic cells during various functional states of the retina. TSitologiya 3 no. 1:89-91 Ja-F '61.

(MIRA 14:2)

1. Institut morfologii zhivotnykh AN SSSR, Moskva i Gosudarstvennyy opticheskii institut, Leningrad.  
(RETINA) (CELLS) (MICROSCOPY)

ZAKHAR'YEVSKIY, A.N.; KUZNETSOVA, A.F.

Biological interference microscopes. TSitologiya 3 no. 2:213-224  
Mr-Apr '61. (MIRA 14:4)

1. Gosudarstvennyy opticheskiy institut, Leningrad.  
(MICROSCOPE)

ZAKHAR'YEVSKIY, A.N.; KUZNETSOVA, A.F.

Use of interference microscopes in biology. TSitologiya 3 no.3:  
245-253 My-Je '61. (MIRA 14:6)

1. Gosudarstvennyy opticheskiy institut, Leningrad.  
(INTERFEROMETRY) (MICROSCOPY)

YEVREINOVA, T.N.; KUZNETSOVA, A.F.

Application of interference microscopy to coacervates. Biofizika  
6 no.3:288-293 '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(MICROSCOPY) (COACERVATES)

YEVPEINOVA, T.N.; KUZNETSOVA, A.F.

Histone-protamine - nucleic coacervate drops. Biofizika 8 no.3:  
395-398 '63. (MIRA 17:11)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo uni-  
versiteta imeni Lomonosova.

L 3558-66 EWT(1)/EEC(k)-2/FCS(k)/EWA(h) WR  
ACCESSION NR: AP5024414

UR/0286/65/000/015/0095/0095

AUTHORS: Zakhar'yevskiy, A. N.; Kuznetsova, A. F.

TITLE: Microinterferometer. Class 42, No. 173454

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 95

TOPIC TAGS: interferometer

ABSTRACT: This Author Certificate presents a microinterferometer according to Author Certificate No. 80251. To utilize it as a microprofilometer, the interferometer plates differ in thickness. A slit diaphragm is mounted in the forward focal plane of the ocular (see Fig. 1 on the Enclosure). A direct vision spectral prism and a readout device are placed behind the ocular. The readout device is, for example, in the form of a luminous readout index projected on the spectral prism. The index is put into the field of view by rotating the spectral prism using a micrometer screw with a readout drum. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 28 May 64

ENCL: 01

SUB CODE: OP

NO REF SOV: 000

OTHER: 000

Card 1/2

L 3558-66

ACCESSION NR: AP5024414

ENCLOSURE: 01

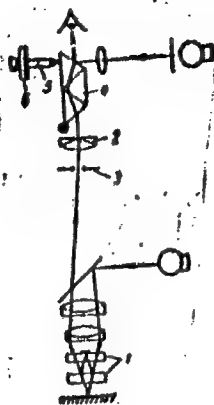


Fig. 1. 1- interferometer plates; 2- ocular;  
3- slit diaphragm; 4- direct vision spectral  
prism; 5- micrometer screw; 6- readout drum

*mlh*  
Card 2/2



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"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000928220001-7

KORDETSOVA, A. G.

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000928220001-7"

KUZ'MINYKH, I.M., professor.; SLOTVINSKIY, N.P.; KUZNETSOVA, A.G.

Obtaining sulfite acid from crushed limestone. *Bum. prom.* 30  
no. 4:5-8 Ap '55. (MLRA 8:6)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I.  
Mendeleeva i Moskovskiy filial Tsentral'nogo nauchno-issle-  
dovatel'skogo instituta bumagi.  
(Sulfites)

KUZ'MINTSEV, I.N., professor; BABUSHKINA, M.D.; BALMASOV, Ye.Ya.; KRAPIVIN, I.N.;  
KUZNETSOVA, A.G.; SHARAPOVA, Z.I.

Testing an enlarged bubbler installation for the production of  
sulfite liquor. Dum.prom.31 no.3:11-13 Mr '56. (MIRA 9:7)

1.Sekel'skiy tsellyulozno-bumashnyy kombinat i Moskovskiy filial  
TSentral'noye nauchno-issledovatel'skoye instituta bumagi.  
(Sulfite liquor)

KUZNETSOVA, A.G., Cand Tech Sci -- (diss) "*Bubbling*  
absorption of ammoniac and pyridine bases from  
coke gas on ~~boundary filter~~ *perfected sieve* plates." Mos, 1958  
11 pp (Min of Higher Education USSR. Mos Order of  
Lenin Chem Tech Inst im D.I. Mendeleev) 150 copies  
(KL, 50-58, 125)

AUTHORS: Kuz'minykh, I. N., (Deceased), Kuznetsova, A. G. SOV/156-58-4-48/49

TITLE: New Production Scheme of Ammonium Sulfate in Chemical Coking Plants (Novaya skhema polucheniya sul'fata ammoniya na koksokhimicheskikh zavodakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 799-803 (USSR)

ABSTRACT: The method is based on a simultaneous adsorption of ammonia and pyridine on processing coke-oven gases and on the subsequent transition into ammonium sulfate and pyridine base. The formation scheme is indicated in figure 2. In order to prevent crystallization of the ammonium sulfate in the absorbent, the added solution must be unsaturated with a concentration not exceeding 40% of ammonium sulfate. The uncombined sulfuric acid in the solution must be of 1-1.5%. The crystallization of the ammonium sulfate from these solutions is carried out in the vacuum crystallizer. On this occasion ammonium sulfate crystallizes to large crystals. The pyridine base is separated from the mother liquid. The large-crystal ammonium sulfate is pure and an additional drying is not required.

Card 1/2

New Production Scheme of Ammonium Sulfate in Chemical Coking Plants SOV/156-58-4-48/49

There are 2 figures, 1 table, and 8 references, 3 of which are Soviet.

ASSOCIATION: Kafedra tekhnologii mineral'nykh kislot i soley Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair of Technology for Mineral Acids and Salts at the Moscow Institute of Chemical Technology imeni D. I. Mendeleev)

SUBMITTED: March 27, 1958

Card 2/2



18 02 KUZNETSOVA, A. G.

AUTHORS: Semenov, Yv. N., Zhinkin, D. Ya.,  
Kuznetsova, A. G., Kollorkin, R. G.

32-2-26/60

TITLE: Short Reports (Korotkiye soobshcheniya).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 192-192  
(USSR).

ABSTRACT: A method operating with a magnetic scales for the determination of the density of metal-ceramic ferromagnetic products is applied by Yu.N. Semenov (Polytechnical Institute imeni A.A. Zhdanov, Gor'kiy). The tear-off force of a permanent magnet is directly proportional to the density of the material. The duration of examination is similar to that according to the gravimetric method. Based on experimental results D.Ya. Zhinkin and A.G. Kuznetsova proposed a modification of the method according to GOST 6989-54 for lacquers and paints, published by the lacquer and paint industry. An infrared lamp should be employed for the determination of the dry residue of  $\Sigma$  organic silicon insulation lacquers, because by this means the duration of analysis is much reduced. R.G. Koldorkin (Polytechnical Institute imeni A.A. Zhdanov, Gor'kiy) determined the cross-sections of bodies with a complicated shape by means

Card 1/2

Short Reports.

32-2-26/60

of displacement of liquid.

ASSOCIATION: Gor'kiy Politechnic Institute imeni A. A. Zhdanov (Gor'kovskiy  
Politekhnikheskiy Institut im. A. A. Zhdanova)

AVAILABLE: Library of Congress  
1. Scientific reports-USSR

Card 2/2

KUZNETSOVA, A. G.

A. G. Kuznetsova, K. A. Andrianov and D. Ya. Zhinkin, The basic Reaction for Obtaining Polyorganosilicoxane Resins."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1959.

Zhurnal prikladnoy khimii, 1959, Nr 1, pp 238-240 (USSR)

KUZNETSOVA, A.G.

AUTHORS: Kuz'minykh, I.N., Doctor of Technical Sciences, <sup>SOV/68-59-6-10/25</sup> Kuznetsova, A.G. (Deceased) and

TITLE: The Use of Perforated Plates for the Absorption of Ammonia and Pyridine (Primeneniye proval'nykh sitchatykh tarellok dlya barbotazhnoy absorbtzii ammiaka i piridina)

PERIODICAL: Koks i Khimiya, 1959, Nr 6, pp 38-43 (USSR)

ABSTRACT: In order to obtain data for designing absorption columns with perforated plates a study of a number of factors on the absorption of ammonia and pyridine separately and simultaneously has been made on a laboratory installation (shown in Fig 2). An artificial gaseous mixture similar to coke oven gas in respect of concentrations of ammonia and pyridine was used for the experiments. The experimental results were evaluated on the basis of analyses of the gaseous and liquid phases. The influence of the following factors was tested: the influence of partial pressure of ammonia and pyridine in gas (Fig 3); the influence of acidity of the starting solution on the degree of absorption of ammonia and pyridine (Fig 4); the influence of the concentration of ammonium sulphate in the absorption solution on the degree of absorption

Card 1/4

The Use of Perforated Plates for the Absorption of Ammonia and Pyridine

80V/68-59-6-10/25

of ammonia and pyridine and on the hydraulic resistance of the plate (Fig 5); the influence of the concentration of pyridine sulphate in solution on the degree of absorption of pyridine (Fig 6); the influence of temperature on the degree of absorption of ammonia and pyridine (Fig 7); the influence of the density of spraying on the degree of absorption of ammonia (Fig 8); the influence of gas velocity in the column on the degree of absorption of ammonia and pyridine and on the hydraulic resistance of the plate (Fig 9); the influence of the perforated cross-sectional area of the plate on the degree of absorption of ammonia and on the hydraulic resistance of the plate (Fig 10); the influence of the composition of the final solution on the absorption of pyridine on one, and three and five plates (Fig 11) - with five plates the final acidity of the solution should be not lower than 1.5% of sulphuric acid. On the basis of the results obtained a scheme for the removal of ammonia (as ammonium sulphate) and pyridine from coke oven gas is proposed (Fig 12). After cooling

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SOV/68-59-6-10/25

The Use of Perforated Plates for the Absorption of Ammonia and Pyridine

in primary condensers, the gas is passed into the bottom of an absorption column with five perforated plates (perforated area 24.7%). A solution containing ammonium and pyridine sulphates and free sulphuric acid is supplied to the top of the absorption column from a mixer. In order to avoid crystallization of ammonium sulphate in the absorber, the solution leaving it should not be saturated with ammonium sulphate and should contain 1.5% of free sulphuric acid. Under these conditions 99.9% ammonia and 95% pyridine absorption takes place. Ammonium sulphate is crystallized out in a vacuo-crystallizer and a part of the mother liquid after the separation of sulphate crystals is directed to the pyridine installation while the remaining part is returned to the mixer to be returned for absorption. The depyridinized liquor is also returned to the mixer. It was calculated that one absorber 3.1 m high and 1.2 m in diameter is sufficient to remove ammonia and pyridine bases from coke oven gas of two batteries. The volume of the absorber 9m<sup>3</sup> and its resistance 115mm H<sub>2</sub>O. For

Card 3/4

SOV/68-59-6-10/25  
The Use of Perforated Plates for the Absorption of Ammonia and  
Pyridine

the same capacity the volume of the usual saturator  
equals about  $35\text{m}^3$  and its resistance is about  
 $600\text{mm H}_2\text{O}$ .

Card 4/4 There are 12 figures, 1 table and 5 references, 3 of  
which are Soviet and 2 English.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut imeni  
D.I. Mendeleyeva (Moscow Institute of Chemical  
Technology imeni D.I. Mendeleyev)

5 (3)

AUTHORS:

Andrianov, K. A., Zhinkin, D. Ya.,  
Kuznetsova, A. G.

307/79-29-5-22/77

TITLE:

On the Common Hydrolysis of Diethyl-dichloro-silane and  
Phenyl-trichloro-silane (O sovmostnom gidrolize  
dietildikhlorosilana i feniltrikhlorsilana)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1504-1507  
(USSR)

ABSTRACT:

In the present paper the results obtained in the common hydrolysis of equimolar mixtures of diethyl-dichloro-silane and phenyl-trichloro-silane are discussed. The reaction process can proceed in two concurrent directions. In one case a mixture of polymeric products of the hydrolysis which took place separately, is formed - of polydiethyl siloxanes and polyphenyl-siloxanes. In the second case products of the co-hydrolysis are formed - the polyethyl-phenyl-siloxanes. In order to determine the direction of the course of reaction the products of the co-hydrolysis of the above-mentioned monomers were investigated. To be able to interpret the results obtained, the data determined in the analysis were compared with the values calculated for the individual polymers

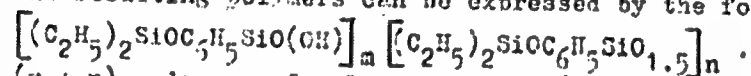
Card 1/3



On the Common Hydrolysis of Diethyl-dichloro-silane  
and Phenyl-trichloro-silane

SOV/79-29-5-22/75

(Table 1). On the determination of the mean molecular weights of fractions of the co-hydrolysis products the molecular weights and the dispersity of these products were found to depend on the solvent used (Fig). The products obtained on the co-hydrolysis of diethyl-dichloro-silane and phenyl-trichloro-silane with excess water were investigated. It may be stated from the results obtained that the composition of the resulting polymers can be expressed by the formula



(m + n) - degree of polymerization, (m : n) - the ratio of polydiethyl-phenyl-hydroxy- and polydiethyl-phenyl siloxanes. The mean values of these coefficients are given in table 2. As can be seen the influence of the solvent does not only concern the dispersity of the polymeric mixture and the degree of polymerization but also the quantity of the hydroxyl-containing compounds occurring in the hydrolysis products. The maximum content of hydroxyl groups is found in the hydrolysis products in ether, the minimum in benzene. There are 1 figure, 2 tables, and 3 Soviet references.

Card 2/3

87923

S/191/60/000/004/004/015  
B016/B058

15.8116

AUTHORS: Zhinkin, D. Ya., Kuznetsova, A. G., Chinenova, M. A.

TITLE: Study of the Composition of Ethoxy-phenyl Silanes Obtained  
by Phenylation of the Ethyl Ester of o-Silicic Acid

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 13-15

TEXT: The authors report on their study of the composition of ethoxy-phenyl silanes formed under various conditions by phenylation of the ethyl ester of o-silicic acid. Special attention was devoted to various quantitative ratios of the phenyl-magnesium halide used to the ester mentioned. Since a mixture of products with different degrees of substitution develops at various quantitative ratios the authors undertook the one-stage phenylation of the ester by means of chloro benzene, in the presence of magnesium at ester-to-magnesium ratios of 1 : 1, 1 : 1.5, and 1 : 2. The resulting products are tabulated: ethyl ester of o-silicic acid (not reacted rest): 57.8 - 24.6 mole %; triethoxy-phenyl silane: 11.2-18.0%; diethoxy-diphenyl silane: 16.9 - 37.7%; and ethoxy-triphenyl silane: 14.1 - 19.7%. The authors conclude from these data that the phenylated

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87923

Study of the Composition of Ethoxy-phenyl  
Silanes Obtained by Phenylation of the  
Ester of o-Silicic Acid

S/191/60/000/004/004/015  
B016/B058

ethoxy silanes are formed at different rates. Moreover, they are of the opinion that the ester used and diethoxy-diphenyl silane, which have symmetric molecules, are more stable in phenylation than the other products (Ref. 1). They describe the synthesis and separation of the reaction products, as well as their hydrolysis by means of a 10% HCl solution in the presence of sulfuric ether. Among the hydrolysis products were solid crystals of diphenyl-dihydroxy silane. The authors finally determined the silicon content in the products. A paper by A. V. Topchiyev and N. S. Nametkin (Ref. 2) is mentioned. There are 2 tables and 4 references: 3 Soviet and 1 British. X

Card 2/2

87434

S/191/60/000/010/006/017  
B004/B060

15.8116

AUTHORS:

Kuznetsova, A. G., Andrianov, K. A., Zhinkin, D. Ya.

TITLE:

Production and Properties of Some Organohydroxy Silanes

PERIODICAL:

Plasticheskiye massy, 1960, No. 10, pp. 16-19

TEXT: The authors wanted to define the conditions relative to the production of dimethyl dihydroxy silane and to determine the solubility of dimethyl dihydroxy silane, diethyl dihydroxy silane, and phenyl trihydroxy silane in different solvents. Moreover, they wanted to study their condensation in the presence of HCl. The reactions took place in vessels rendered water-repellent by means of the ГЖК-94 (GKZh-94) organosilicon liquid. The synthesis of dihydroxy silanes proceeded from dimethyl dimethoxy-, dimethyl diethoxy-, and phenyl trimethoxy silane, respectively, which were obtained by reaction of the corresponding chloro compounds with the corresponding alcohol in the presence of pyridine. The following processes are described. 1) 40 g  $(CH_3)_2Si(OCH_3)_2$  were allowed to react at room temperature with 24 g of distilled water, the

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Production and Properties of Some  
Organohydroxy Silanes

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S/191/60/000/010/006/017  
B004/B060

solvents (alcohol and water) were distilled off at 3-10 mm Hg, and the crystals were washed with benzene, heptane, or petroleum ether. Yield 70-75%. 2) 44 g of  $(C_2H_5)_2Si(OC_2H_5)_2$  were allowed to react with 18 g of 0.5% acetic acid. The liquid turned homogeneous after 5-7 days, and was then treated as described under 1). 3) 99 g of  $C_6H_5Si(OCH_3)_3$  were allowed to react with 50 g of 0.5% acetic acid, temperature being kept at 5-10°C. The product was cooled down to -20°C after 3-5 hours and filtered off in vacuum. Condensation took place in dioxan in the presence of 0.0012, 0.012, or 0.046 N HCl. The dimethyl compound condensed in 0.5N HCl to 80-85% within 15 min. The diethyl compound reacted more slowly, but its condensation rose with an increase of the HCl concentration. The same holds for the phenyl compound. Up to a yield of 40% the condensation proceeded at a constant rate which depended on the concentration of HCl only. It is believed that dimers are formed at this stage. The gradual condensation was particularly well observable in the phenyl compound. Cyclization takes place above the 35% yield. Cyclic and linear polymers with considerable OH group contents resulted. They were determined by titration with Fischer's reagent. The following data for the solubility

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Production and Properties of Some  
Organohydroxy Silanes

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S/191/60/000/010/006/017  
B004/B060

at 20°C are indicated (in %):

Solvent	$(CH_3)_2Si(OH)_2$	$(C_2H_5)_2Si(OH)_2$	$C_6H_5Si(OH)_3$
Water	40.6	9.0	4.1
Ethanol	49.6	44.0	15.0
Ether	6.8	10.8	0.5
Acetone	28.4	29.0	11.6
Toluene	0.0	0.2	0.0
Dioxan	30.8	19.3	15.2

There are 3 figures, 1 table, and 20 references: 7 Soviet, 9 US, 2 German,  
and 2 Japanese.

Card 3/3

s/080/60/033/04/20/045

AUTHORS: Kuz'minykh, I.N., Kuznetsova, A.G.

TITLE: The Equilibrium Between Pyridine Vapors and Acidic Solutions of Pyridine Sulfate .

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 4, pp 865 - 870

TEXT: The pressure of pyridine vapors over solutions of pyridine sulfate containing various amounts of ammonium sulfate and a small quantity of sulfuric acid has been determined by experiment within the temperature range 30 - 55°C, and an equation for this purpose has been derived. A diagram of the laboratory installation is given. The solutions contained 5 - 35 g/l pyridine sulfate (based on pyridine), 0 - 515 g/l ammonium sulfate, 0.065 - 1.89% free sulfuric acid at temperatures of 30 - 55°C. The pressure equilibrium of pyridine vapors increases with the temperature independently of the composition of the solution. An increase in the acidity of the solution leads to a decrease in the equilibrium pressure of the pyridine vapors. An increase in the concentration of pyridine sulfate and ammonium sulfate causes an increase in pressure. Independently of the ammonium content in the solution and the temperature, the acidity of the solution affects the pressure of pyridine vapors in a power of 1.008 and the

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The Equilibrium Between Pyridine Vapors and Acidic Solutions of Pyridine Sulfate

concentration of pyridine sulfate in a power of 1.165. The greatest effect on the vapor pressure is due to the temperature. For solutions not containing ammonium sulfate the index of the temperature effect is 4.16, and for solutions saturated with ammonium sulfate - 6.83. Formulae for calculating the pressures of pyridine over solutions containing 5 - 44 g/l pyridine, 0.2 - 2% free sulfuric acid without ammonium sulfate and saturated with it were obtained.

There are: 6 graphs, 1 diagram, 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy ordena Lenina khimiko-tekhnologicheskoy institut im. Mendeleyeva  
(Moscow Chemical-Technological Institute imeni Mendeleyev, Bearer of the  
Lenin Order .

SUBMITTED: November 3, 1958

Card 2/2



S/661/61/000/006/038/021  
D202/D302

AUTHORS: Kuznetsova, A. G., Andrianov, K. A. and Zhinkin, D. Ya.

TITLE: On the co-hydrolysis of diethyldichlorosilane and phenyl-trichlorosilane

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii. no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimi i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad, Izd-vo AN SSSR, 1961, 175-179

TEXT: A discussion on a previous report (no. 2, p. 33, this publication) in which the authors and P. V. Davydov (Moscow), N. S. Leznov (Moscow), N. N. Sokolov (VEI, Moscow) and A. V. Karlin (VNIISK, Leningrad) took part. The role of solvents, especially that of ethyl-ether, in the co-hydrolysis process of the above-mentioned compounds and the unfavorable effect of methyl-trichlorosilane admixtures in dimethyldichlorosilane used in the process were discussed.

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SURKOV, Ye.I.; KUZNETSOVA, A.G.; GORIKOV, P.V.

Water bubble absorption of phenol vapors from flue gases.  
Trudy MKHTI no.33:48-51 '61. (MIRA 14:10)  
(Plate towers)  
(Phenols)

38066

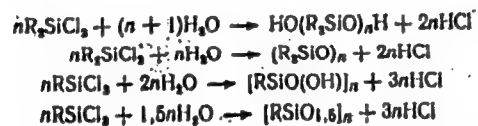
S/191/62/000/006/007/016  
B110/B138

15.8170  
AUTHORS: Kuznetsova, A. G., Andrianov, K. A., Zhinkin, D. Ya.

TITLE: Investigation of the hydrolytic condensation of diethyl dichlorosilane and phenyl trichlorosilane

PERIODICAL: Plasticheskiye massy, no. 6, 1962, 19-22

TEXT: The composition of hydrolytic condensation products of equimolecular quantities of diethyl dichlorosilane and phenyl trichlorosilane at organochlorosilane/water ratios of 1 : 1 : 2.5 and 1 : 1 : 1.25 was studied. The products formed are:



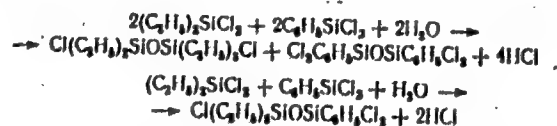
Polyorganosiloxanes and non-reactive diorganodichlorosilane are likewise

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Investigation of the ...

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formed at ratios of water to hydrolyzable Cl < 0.5 : 1. The composition of the hydrolytic condensation products of dimethyl dichlorosilane, diphenyl dichlorosilane, and methyl phenyl dichlorosilane was investigated in a homogeneous solution with an insufficient quantity of water. The ratio of the components in the hydrolytic condensation of 5 moles/l solutions of phenyl trichlorosilane and diethyl dichlorosilane in dioxane (1 : 1 : 1.25) at 0-5°C was calculated by



Eight fractions containing 20.61-27.38% Si and 51.68-54.56% C were separated in yields of 0.8-21.8% by fractional distillation between 33 and 220°C. For the fractions between 74 and 185°C about 10% 1,3-diphenyl-1,1,3,3-tetrachlorodisiloxane was present, and in the high-boiling fractions (Si content, 22.0-22.04%) the ratio of diethylsiloxo groups to phenylsiloxo groups was ~0.3 : 1. In the hydrolytic condensation of homogeneous solutions with an insufficient quantity of water, the hydrolysis of

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Investigation of the ...

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phenyl trichlorosilane occurs more rapidly than that of diethyl dichlorosilane. Non-reactive diethyl dichlorosilane and copolymers with a high content of phenylsiloxy groups are thus formed. In the hydrolytic condensation of 6.5 M solutions of diethyl dichlorosilane and phenyl trichlorosilane in dioxane (1 : 1 : 2.5), at  $\sim 25^{\circ}\text{C}$ , nine fractions were obtained with a content of polymer between 3.7 and 20.5%, of Si between 22.62 and 25.44%, and of OH between 1.56 and 3.03%, and with molecular weights between 834 and 1215. This proves the formation of copolymers with a variable ratio between diethylsiloxy and phenylsiloxy groups. The absence of a continuous decrease of the molecular weights is due to the varying solubility of the polymers, which depends not only on the molecular weight but also on the chemical composition. The content of OH groups indicates the presence of  $\text{C}_6\text{H}_5\text{SiO}_{1.5}$  and  $\text{C}_6\text{H}_5(\text{OH})\text{SiO}$  groups. For the ratio 1 : 1 : 2.5 the condensation products are:

$$[(\text{C}_2\text{H}_5)_2\text{SiO}]_x [\text{C}_6\text{H}_5\text{SiO}_{1.5}]_y [\text{C}_6\text{H}_5\text{SiO}(\text{OH})]_z$$

where  $x + y + z$  is the number of structural units in the copolymer molecule;  $x : (y + z)$  is the ratio of diethylsiloxy to phenylsiloxy groups in the copolymer molecule;  $z : y$  is the ratio of phenylsiloxy to phenyl-(hydroxy)-siloxy groups

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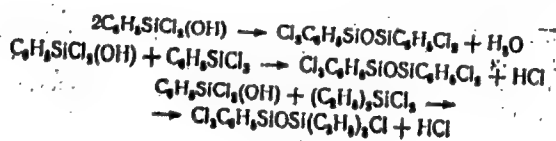
Investigation of the ...

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B110/B138

which determines the completeness of condensation. Maximum, minimum, and average values are respectively: 11, 7, and 8.5 for  $x + y + z$ ; 2, 0.5, and 1 for  $x : (y + z)$ ; and -, -, and 0.5 for  $z : y$ . The simultaneous presence of diethyl dichlorosilane and phenyl trichlorosilane and an insufficient amount of water in the first stage produce

$$\text{C}_6\text{H}_5\text{SiCl}_3 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_5\text{SiCl}_2(\text{OH}) + \text{HCl}$$

Polymerization may take place as follows:



The low concentration of phenyl dichlorosilane causes chiefly (9) and (10), which explains the presence of diethylsiloxy groups in the copolymer. There are 3 tables.

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KUZNETSOVA, A. G.; ANDRIANOV, K. A.; ZHINKIN, D. Ya.

Hydrolytic condensation of dimethylchlorosilane and phenyl-  
trichlorosilane. Plast. massy no.11:15-18 '62.  
(MIRA 16:1)

(Silane) (Condensation products(Chemistry))

KUZNETSOVA, A.G.; IVANOV, V.I.

Effect of sulfuric acid on the product of cohydrolysis of  
trimethylchlorosilane and methylphenyldichlorosilane. Plast.massy  
no.10:17-21 '63. (MIRA 16:10)



ACCESSION NR: AP4028548

S/0191/64/000/004/0027/0029

AUTHOR: Kuznetsova, A. G.; Andrianov, K. A.; Zhinkin, D. Ya.

TITLE: Formation of polymers by the hydrolytic co-condensation of diethyldichlorosilane (or dimethyldichlorosilane) and phenyltrichlorosilane

SOURCE: Plasticheskiye massy\*, no. 4, 1964, 27-29

TOPIC TAGS: siloxane polymer, hydrolytic co condensation, diethyl-dichlorosilane, phenyltrichlorosilane, polydialkylphenylhydroxysiloxane copolymer, polydialkylphenylsiloxane copolymer, hydrolysis rate, reaction mechanism

ABSTRACT: This work was conducted to explain the possible mechanism by which the polymers are formed during hydrolytic condensation of equimolar mixtures of diethyldichlorosilane (I) or dimethyldichlorosilane (II) and phenyltrichlorosilane (III). The chemical composition (Si and OH content) and molecular weight distribution of the polymers were obtained by reaction of equimolar amounts of I (or II) with III; of diethylsilanediol (IV) (or dimethylsilanediol (V)) with phenylsilanetriol (VI); and of IV with III. Regardless of the initial monomer, the product

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ACCESSION NR: AP4028548

obtained was  $[R_2SiOC_6H_5SiO(OH)]_m \cdot [R_2SiOC_6H_5SiO_{1.5}]_n$ , the copolymer of polydialkylphenylhydroxy- and polydialkylphenyl-siloxanes. In the various products the m:n ratio varied from 0.31 to 0.73 and (m+n) averaged 3—7. It is concluded that the polymers resulting from the hydrolytic co-condensation of the silanes are formed through a stage in which the corresponding organosilanol is condensed or formed by direct interaction of the organochlorosilane with the organosilanol, the predominance of the reaction being determined by the hydrolytic condensation conditions. No homopolymers were formed. In excess water the product always contains an equimolar ratio of dialkyl- and phenyl-siloxy groups. In insufficient water, when III is hydrolysed first, the product does not contain a 1:1 ratio of dialkyl- and phenyl siloxy groups. One of the causes for the formation of the copolymer with the equimolar ratio during the hydrolytic condensation of I (or II) with III or during condensation of the silanols IV (or V) with VI is attributed to the difference in influence of the alkyl and the phenyl radicals on the charges of the Si atoms in the original monomer. The alkyl reduces the positive charge and the phenyl increases the positive charge, and interaction occurs between these monomers to form the most stable system - copolymers with alternating monomer units in the molecule. Orig. art. has: 1 table and 4 formulas.

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ACCESSION NR: AP4018057

S/0079/64/034/002/0598/0604

AUTHOR: Kuznetsova, A. G.; Sobolevskiy, M. V.

TITLE: Research in the area of synthesis and conversion of unsaturated organosilicon compounds  
19. Reaction of the Iotsich reagent of some tertiary acetylene alcohols with chlormethyldimethylchlorsilane

SOURCE: Zhurnal obshchey khimii, v. 34, no. 2, 1964, 598-604

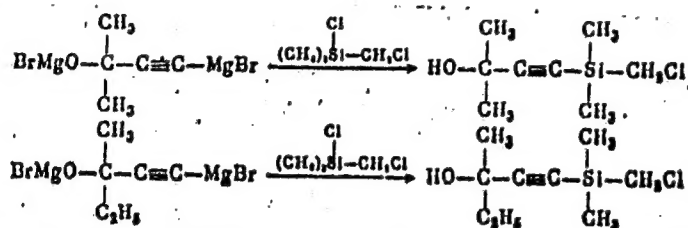
TOPIC TAGS: Iotsich reagent, unsaturated, organosilicon compound, synthesis, conversion, tertiary acetylene alcohol, chloromethyldimethylchlorosilane, methylbutine, methylpentine, chloromethyldimethylsilicone, trialkylchlorosilane

ABSTRACT: The reaction of the Iotsich reagent (dimagnesiumdibromide-dimethylethynylcarbinol) with different trialkylchlorosilanes was studied by I. A. Shikhiyev (I. A. Shikhiyev, M. F. Shostakovskiy, N. V. Komarov. Novy\* e kislороdsoderzhashchiye kremniyorganicheskiye soyedineniya; Azerneftneshr, BAKU, 71 (1960)). A method was

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ACCESSION NR: AP4018057

developed for obtaining mono, di- and triatomic tertiary  $\gamma$ -silicon containing acetylene alcohols. In studying the reaction of the Iotsich reagent with chlormethyldimethylchlorsilane, it was established that the reaction proceeds in the direction of forming corresponding tertiary  $\gamma$ -silicon containing acetylene alcohols as follows:



The presence of hydroxyl groups in the composition of alcohols was established by obtaining corresponding organosilicon acetylene acetal as follows:

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